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Docket No. G-045US02PCT  
Serial No. 09/744,527In the ClaimsClaims 1-42. (Canceled)Claim 43. (Currently Amended)

A composition comprising an isolated recombinant polypeptide comprising a contiguous span of at least 6 amino acids of SEQ ID NO:4, wherein: 1) the contiguous span is a truncated polypeptide sequence of the human geranylgeranyl pyrophosphate synthetase (hGGPPS) hGGPPS protein sequence of (SEQ ID NO:4); 2) said isolated recombinant polypeptide has geranylgeranyl pyrophosphate synthetase (GGPPS) activity or wherein said isolated recombinant polypeptide specifically binds to antibodies that bind to: 1) hGGPPS, 2) a fragment of the hGGPPS protein, or 3) a contiguous span of at least 6 amino acids of the polypeptide of SEQ ID NO:4; and wherein 3) said contiguous span includes at least one amino acid selected from the group consisting of:

- a. a Phe residue at position 204 of SEQ ID NO:4;
- b. a Phe residue at position 295 of SEQ ID NO:4;
- c. a Cys residue at position 205 of SEQ ID NO:4; and
- d. a Pro residue at position 225 of SEQ ID NO:4.

Claim 44 (Previously Presented).

The composition of claim 43, wherein said contiguous span includes said Phe residue at position 204.

Claim 45 (Previously Presented).

The composition of claim 44, wherein said polypeptide comprises contiguous span of at least 10 amino acids of SEQ ID NO:4.

Claim 46 (Previously Presented).

The composition of claim 44, wherein said polypeptide comprises a contiguous span of at least 20 amino acids of SEQ ID NO:4.

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Docket No. G-045US02PCT  
Serial No. 09/744,527Claim 47 (Previously Presented).

The composition of claim 44, wherein said polypeptide comprises a contiguous span of at least 50 amino acids of SEQ ID NO:4.

Claim 48 (Previously Presented).

The composition of claim 44, wherein said polypeptide comprises a contiguous span of at least 100 amino acids of SEQ ID NO:4.

Claim 49 (Previously Presented).

The composition of claim 43, wherein said contiguous span includes said Phe residue at position 295.

Claim 50 (Previously Presented).

The composition of claim 49, wherein said polypeptide comprises a contiguous span of at least 10 amino acids of SEQ ID NO:4.

Claim 51 (Previously Presented).

The composition of claim 49, wherein said polypeptide comprises a contiguous span of at least 20 amino acids of SEQ ID NO:4.

Claim 52 (Previously Presented).

The composition of claim 49, wherein said polypeptide comprises a contiguous span of at least 50 amino acids of SEQ ID NO:4.

Claim 53 (Previously Presented).

The composition of claim 49, wherein said polypeptide comprises a contiguous span of at least 100 amino acids of SEQ ID NO:4.

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Claim 54 (Previously Presented).

The composition of claim 43, wherein said contiguous span includes said Cys residue at position 205.

Claim 55 (Previously Presented).

The composition of claim 54, wherein said polypeptide comprises a contiguous span of at least 10 amino acids of SEQ ID NO:4.

Claim 56 (Previously Presented).

The composition of claim 54, wherein said polypeptide comprises a contiguous span of at least 20 amino acids of SEQ ID NO:4.

Claim 57 (Previously Presented).

The composition of claim 54, wherein said polypeptide comprises a contiguous span of at least 50 amino acids of SEQ ID NO:4.

Claim 58 (Previously Presented).

The composition of claim 54, wherein said polypeptide comprises a contiguous span of at least 100 amino acids of SEQ ID NO:4.

Claim 59 (Previously Presented).

The composition of claim 43, wherein said contiguous span includes said Pro residue at position 225.

Claim 60 (Previously Presented).

The composition of claim 59, wherein said polypeptide comprises a contiguous span of at least 10 amino acids of SEQ ID NO:4.

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The composition of claim 59, wherein said polypeptide comprises a contiguous span of at least 20 amino acids of SEQ ID NO:4.

Claim 62 (Previously Presented).

The composition of claim 59, wherein said polypeptide comprises contiguous span of at least 50 amino acids of SEQ ID NO:4.

Claim 63 (Previously Presented).

The composition of claim 59, wherein said polypeptide comprises a contiguous span of at least 100 amino acids of SEQ ID NO:4.

Claim 64 (Previously Presented).

A composition comprising an isolated recombinant polypeptide comprising a contiguous span of at least 10 amino acids of SEQ ID NO:4, wherein said contiguous span includes a Phe residue at position 257 of SEQ ID NO:4.

Claim 65 (Previously Presented).

The composition of claim 64, wherein said polypeptide comprises a contiguous span on at least 20 amino acids of SEQ ID NO:4.

Claim 66 (Previously Presented).

The composition of claim 64, wherein said polypeptide comprises a contiguous span of at least 50 amino acids of SEQ ID NO:4.

Claim 67 (Previously Presented).

The composition of claim 64, wherein said polypeptide comprises a contiguous span of at least 100 amino acids of SEQ ID NO:4.

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Docket No. G-045US02PCT  
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The composition of claim 43 wherein said polypeptide comprises the amino acid sequence of SEQ ID NO:4.

Claim 69 (Previously Presented).

The composition of claim 43, wherein the isolated recombinant polypeptide comprises a leader sequence, a secretory sequence, a preprotein sequence, a nickel binding polypeptide sequence, a  $\beta$ -globulin sequence, or an amino acid sequence employed for the purification of polypeptides fused to said contiguous span of amino acids.

Claim 70 (Previously Presented).

The composition according to claim 43, wherein said contiguous span consists essentially of 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, or 100 amino acids.

Claim 71 (Previously Presented).

The composition according to claim 43, wherein said contiguous span consists of 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, or 100 amino acids.

Claim 72 (Previously Presented).

The composition according to claim 71, wherein said contiguous span consists of 6 amino acids.

Claim 73 (Previously Presented).

The composition according to claim 71, wherein said contiguous span consists of 10 amino acids.

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Docket No. G-045US02PCT  
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The composition according to claim 71, wherein said contiguous span consists of 20 amino acids.

Claim 75 (Previously Presented).

The composition according to claim 71, wherein said contiguous span consists of 50 amino acids.

Claim 76 (Previously Presented).

The composition according to claim 71, wherein said contiguous span consists of 100 amino acids.

Claim 77 (Canceled).Claim 78 (Previously Presented).

The composition according to claim 43, wherein the contiguous span comprises amino acid positions 200 through 300 of SEQ ID NO:4.

Claim 79 (Previously Presented).

The composition according to claim 43, wherein the contiguous span consists of amino acid positions 200 through 300 of SEQ ID NO:4.

Claim 80 (Previously Presented).

A method of making a recombinant human geranylgeranyl pyrophosphate synthetase (hGGPPS) polypeptide comprising:

- a) transforming a host cell with a polynucleotide encoding a recombinant polypeptide according to claim 43; and
- b) culturing said transformed host cell under conditions conducive to the expression of the polypeptide encoded by said polynucleotide.

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Claim 81 (Previously Presented):

The method according to claim 80, further comprising the recovery of said polypeptide from the cultured host cell.